Therapeutic abortion and its psychological implications: the Canadian experience

ESTHER R. GREENGLASS, PH D

Summary: Approximately 9 months after a legal therapeutic abortion, 188 Canadian women were interviewed. One half were single and the rest were married, separated or divorced. They were matched closely for a number of demographic variables with control women who had not had abortions. Neurotic disturbance in several areas of personality functioning was assessed from questionnaire responses. Out of 27 psychological scales, differences between the abortion and control groups were found on only 3: in general, women who had had abortions were more rebellious than control women, abortion tended to be associated with somewhat greater depression in married women, and single women who had had abortions scored higher on the shallow-affect scale. However, all the personality scores were well within the normal range. Perceived social support was strongly associated with favourable psychological reactions after abortion. Use of contraceptives improved greatly after the abortion, when over 90% of women reported using contraceptives regularly.

Résumé: *L'avortement thérapeutique et ses répercussions psychologiques: l'expérience canadienne*

Environ 9 mois après un avortement thérapeutique légal 188 femmes canadiennes ont été interviewées. La moitié de ces femmes étaient célibataires et l'autre moitié étaient mariées, séparées ou divorcées. Elles furent appariées avec soin, en tenant compte d'un certain nombre de variables démographiques, avec des femmes qui n'avaient jamais été avortées. À partir des réponses à un questionnaire on a estimé le degré de troubles neurotiques présents dans divers zones du fonctionnement de la personnalité. Ce n'est que dans 3 des 27 échelles psychologiques qu'on a trouvé quelque différence entre le groupe des avortées et le groupe témoin. En général, les femmes avortées se montraient plus rebelles que les femmes non avortées, l'avortement chez les femmes mariées semblait entraîner une plus forte dépression, et les femmes célibataires qui avaient eu un avortement étaient cotées plus haut sur l'échelle d'affet superficiel. Cependant, toutes les cotations de personnalité demeuraient dans les limites bien normales. L'appui social ressenti par la femme avortée fut fortement relié à des réactions psychologiques favorables après l'avortement. L'emploi des contraceptifs a largement augmenté après l'avortement, comme l'ont signalé plus de 90% des femmes qui les utilisaient régulièrement.

The scientific study of therapeutic abortion did not really begin until the 4th decade of this century, when changes in laws regulating abortion in several European countries made it possible to examine large groups of women applying for interruption of pregnancy and to assess the outcome. Over the years many reports on abortion and its effects on women have been published. Most of these studies were done in Scandinavia, Europe (east and west) and the United States. But few studies are available on women's reactions to abortion in Canada, where abortion is legal only when granted by a therapeutic abortion committee of a hospital when the pregnancy is thought to endanger the woman's life or health. It is difficult to interpret and compare research results from other countries because of differences in criteria for abortion, cultural and social differences between populations studied, lack of clarity and agreement about diagnostic terms, and a relative paucity of firm measures that meet general scientific acceptance.[1] Since 1971 I have been engaged in a comprehensive research project investigating women's reactions to abortion. The results of parts of this research project follow.

Methods

Women who had had therapeutic abortions and women in three control groups were contacted in two ways. Some women were asked by one of five interviewers (none of whom was the author) to participate in the study either in person or by telephone. Other women requested to participate after seeing an advertisement or flyer describing the study. Thus, this study overcame the bias frequently present in many studies of this kind that include only women who request to participate.

Abortion groups

In 1972-73, 188 women who had had legal therapeutic abortions were interviewed an average of 36.55 weeks after abortion. While most had obtained legal abortions in Canada, 31 reported going to the United States for an abortion and 3 had had legal abortions elsewhere. During the interview women were asked to describe themselves by a variety of demographic variables such as age, religion, marital status, education and socioeconomic status, and to describe their abortion experience by several variables such as number of days it took them to locate a physician who would do the abortion, week of pregnancy of the abortion, abortion facilities, who made the abortion decision, and attitudes of the physician and staff toward the woman. They were also questioned as to use of contraceptives before the abortion, at conception and after the abortion.

Control groups

Three groups of women who had not had abortions were matched closely with women in the abortion groups as to age, religion, education and socioeconomic status. One of the groups consisted of 20 single women who had not had abortions. Another group consisted of 23 married women who had given birth 5 to 17 months before the interview (approximately the same time interval as between the abortion and the interview for most of the women). A third group consisted of 40 married women who did not have any babies up to 17 months old or who had never given birth. Thus it was possible to compare psychological adjustments among married women after they had carried a fetus to term and given birth, with psychological adjustment after an abortion.

Psychological measures

The main psychological measure used was the Differential Personality Inventory (DPI), a true-false question-

From the department of psychology, York University, Downsview, Ont.

Reprint requests to: Dr. E.R. Greenglass, Associate professor, Department of psychology, York University, 4700 Keele St., Downsview, ON M3J 1P3

naire devised by Jackson and Messick[2] to measure neurotic disturbance in personality functioning. The answers to 432 questions yield scores on a series of 27 scales that evaluate degree of psychological maladjustment or deviance in different areas of personality. The higher the score on each scale, the more of that characteristic the person is thought to have. The scales are described here under five general headings. First, there are scales that measure physical and somatic complaints such as insomnia (Ins), headache-proneness (HPr), health concern (HCn), hypochondriasis (Hyp) and somatic complaints (SmC). A second set of scales measures the person's "broodiness" (Brd), depression (Dep) and self-depreciation (SDp). A third group of scales assesses the degree of disturbance in social interaction by, for example, degree of cynicism (Cyn), desocialization (Dsc), familial discord (FmD), hostility (Hos), ideas of persecution (IPs), irritability (Iry), rebelliousness (Reb) and socially deviant attitudes (SDA). Seven scales are used to assess perceptive, intellectual and affective disturbance by measuring, for example, disorganization of thinking (DTh), impulsivity (Imp), panic reaction (PnR) and feelings of unreality (FUn). Five other scales measure, for example, shallow affect (SAf), sadism (Sdm) and repression (Rep). Self-ratings and attitudes toward abortion were also recorded during the interview but the results of their analysis will not be reported here.

Statistical analysis

Either one-way or two-way analysis of variance was used in comparing DPI scores.

Table I—F values and means for one-way analyses of variance of DPI* scores of 126 married women who had either had or had not (control) had abortions

DPI scale	F value	df	DPI means: Abortion group (n = 63)	Controls with babies† (n = 23)	Controls without babies† (n = 40)
Depression	3.14‡	2/123	2.84	1.61	1.43
Rebelliousness	4.07‡	2/123	8.63	7.22	7.08

*Differential Personality Inventory.
†Babies 5 to 17 months old.
‡$P < 0.05$.
Depression: comparing means of abortion and control groups, $t = 2.42$, $df = 123$, $P < 0.01$.
Rebelliousness: comparing means of abortion and control groups, $F = 2.77$, $df = 123$, $P < 0.10$.

Table II—F values and means for one-way analyses of variance of DPI scores of 120 single women in abortion and control groups

DPI scale	F value	df	DPI means: Abortion group (n = 100)	Control group (n = 20)
Rebelliousness	6.83*	1/118	9.54	7.60
Shallow affect	4.34†	1/118	2.86	1.95

*$P < 0.01$.
†$P < 0.05$.

Table III—F values and means for two-way analyses of variance of DPI scores of 113* married women by group (abortion v. control) and husband's occupation (low v. high status)†

DPI scale	F value	df	DPI means: Abortion group: Low-status occupation (n = 29)	Abortion group: High-status occupation (n = 28)	Control group: Low-status occupation (n = 23)	Control group: High-status occupation (n = 33)
Disorganization of thinking	5.83‡	1/109	3.86	1.71	2.44	2.52
Feelings of unreality	5.41‡	1/109	4.41	2.46	2.65	2.64
Self-depreciation	6.87§	1/109	2.52	0.57	1.35	1.39

*Husband's occupation was reported by 57 women who had had abortions and 56 controls.
†Only results for interactions are reported here.
‡$P < 0.05$.
§$P < 0.01$.

Results

Demographic characteristics of abortion groups

Of the women who had had abortions 53% were single at the time of the abortion; 27 of them were living with the man responsible. Approximately 33% of the women were married and living with their husbands. The remaining women were either separated or divorced at the time of the abortion. Forty-three percent of the women were Protestant, 26% were atheists or agnostics, 18% were Catholic and 7% were Jewish. Their ages ranged from 14 to 44 years, with a mean of 22 years for single women and 30 years for married women. Only 8% of the women had changed their marital status by the time of the follow-up interview: nine had married, three had separated from their husbands and three had received a divorce.

DPI scores

The mean DPI scores for the two married control groups, the married abortion group, and the abortion and control groups of single women were well within the normal range of standardized DPI scores as reported by Jackson and Messick.[2] On only one scale, panic reaction, one group — the single control group — had an average score that was slightly higher than the mean reported for the normative group of Jackson and Messick.

Married women who had had abortions were more depressed and rebellious than married women in the two control groups combined (Table I).

Single women who had had abortions obtained higher scores on rebelliousness and shallow affect than did single women who had not had abortions (Table II).

Religion, age, education and husband's income were not related to a woman's reactions to abortion, but husband's occupation was. Women who had had abortions whose husbands' occupations were of relatively lower status had higher scores on disorganization of thinking, feelings of unreality and self-depreciation than women whose husbands' occupations were of higher status.* In the control group the mean DPI scores for each of the husband's occupational groups were almost alike (Table III).

Abortion decision

Approximately 48% of women responded that they had made the decision to have the abortion by themselves, 44% responded that they had

*Higher-status occupations include professional, managerial, financial, semiprofessional and technical occupations; lower-status occupations include clerical and sales, artisan, skilled factory, service, etc. occupations.

made the decision with the support of one or two persons, and 6% said that they were against the abortion but were pressured into the decision by another person or persons. Women in this last group scored highest on the scales of hypochondriasis, ideas of persecution and self-depreciation, and women in the second group scored lowest on these three scales (Table IV).

Attitudes of physician and staff toward the woman

Attitudes of the physician and staff toward the woman, as described by her, were categorized by independent observers as positive, negative or neutral: 62% of women perceived the physician's attitude as positive and 65% perceived the staff's attitude as positive; 23% perceived the physician's attitude as negative and 19% perceived the attitude of the staff as negative; and approximately 13% perceived the attitudes of the physician and staff as neutral. Women who perceived their physician's attitude as negative had higher scores than those who perceived their physician's attitude as either positive or neutral on scales of insomnia, feelings of unreality, health concern, hypochondriasis, rebelliousness and somatic complaints; women who perceived their physician's attitude as positive scored lowest on scales of insomnia, impulsivity, rebelliousness and somatic complaints (Table V). Similar results were obtained for the relation between DPI scores and nurses' attitudes as perceived by the women.

Contraceptive use

When questioned about use by the couple of contraceptives before abortion 53.2% of women reported that they had always used some form of contraceptive. Only 9.6% of women said that they had never used some form of contraceptive. At the time of conception 52% of couples were using some form of contraceptive. When questioned about use by the couple of contraceptives after the abortion 91.5% of women stated that they always used some form of contraceptive and 0.5% said that they never used contraceptives.

Discussion and conclusions

Married women who had had abortions were found to be more depressed and rebellious than married women in the two control groups combined. The results suggest that, for married women, having an abortion is not associated with profound and widespread psychological disturbance afterwards, for this group obtained higher scores on only 2 of the 27 psychological scales — rebelliousness and depression. But even though women who had had abortions were more depressed and rebellious than control women, their scores were well within the normal range of scores as reported by Jackson and Messick.[2] This means that the scores obtained here were of a similar magnitude and within the same range as those of the majority of people to whom Jackson and Messick administered the test in the past.

It is possible that the relatively greater depression observed among married women who had had legal abortions was evident because of insufficient time (average, 9 months) between the abortion and the interview. Several investigators have reported that, while symptoms such as depression, guilt and anxiety may occur in some women immediately after an abortion, they tend to disappear within a few weeks or a few months.[3-5]

In one study conducted in Aberdeen two groups of women, unmarried and married, were evaluated at the time of referral for abortion and at the time of follow-up 18 months later.[6] At follow-up, comparisons were made between women whose pregnancies had been aborted and those who had unwillingly continued the pregnancy to term because their application for abortion had been rejected. With regard to depression and hostility, "the aborted groups of both single and ever-married women were the ones that showed the greatest improvement". In other words, women who obtained an abortion showed more improvement — more lifting of depression and lessening of hostility — than the women who were compelled to carry an unwanted pregnancy to term. This was most pronounced in the unmarried group. "One in 9 in the abortion group rated as depressed as compared with 1 in 4 of those continuing the pregnancy — an effect which approached the 5% level of significance." Moreover, regrets about continuing the pregnancy were more common among those who had delivered than among those who had aborted. Clearly then, the mental health of a woman faced with an unwanted pregnancy stands a greater chance of improving when the woman has an abortion than when she is forced to deliver a child.

Women who had had abortions were found to be more rebellious than control women. A person with a high score on rebelliousness is defined as one who "will frequently be uncooperative, disobedient, and resistant when faced with rules and regulations; reacts

Table IV—F values and means for one-way analyses of variance of DPI scores in 188 women, by persons involved in the abortion decision

			DPI means for persons involved in decision		
DPI scale	F value	df	Self (n = 92)	Others supportive (n = 84)	Others against (n = 12)
Hypochondriasis	5.61*	2/185	3.28	2.50	4.83
Ideas of persecution	6.02*	2/185	2.55	2.04	4.42
Self-depreciation	3.36†	2/185	1.73	1.24	2.83

*P < 0.01.
†P < 0.05.

Table V—F values and means for one-way analyses of variance of DPI scores in 185* women, by perceived attitude of the physician who performed the abortion

			DPI means for physician's attitude		
DPI scale	F value	df	Positive attitude (n = 116)	Negative attitude (n = 44)	Neutral attitude (n = 25)
Insomnia	4.70†	2/182	2.17	3.25	3.20
Feelings of unreality	2.97‡	2/182	4.19	5.43	4.04
Health concern	3.60‡	2/182	5.53	6.84	4.80
Hypochondriasis	3.25‡	2/182	2.89	3.84	2.40
Rebelliousness	6.04†	2/182	8.63	10.41	9.60
Somatic complaints	3.57‡	2/182	3.47	4.84	3.52
Impulsivity	4.32†	2/182	6.66	7.25	8.96
Repression	4.26‡	2/182	4.60	3.45	4.64

*Three did not report their physician's attitude towards them.
†P < 0.01.
‡P < 0.05.

against discipline and criticism".[7] Thus, having an abortion in Canada appears to be associated with the characteristics of nonconformity, deviance and disobedience. It may be that women must possess some of these characteristics in order to obtain a legal abortion in this country, where there is still much ambivalence associated with the issue of abortion. Equally plausible is the possibility that the woman who has a legal abortion in Canada is made to feel deviant, because her reasons for abortion (in many instances psychiatric) must convince a therapeutic abortion committee that she "needs" the abortion badly enough.

For single women who had had abortions, as with married women, the results of this study do not support the idea that having an abortion is associated with subsequent profound and widespread psychological disturbance, for this group obtained higher scores than control women on only 2 of the 27 psychological scales — rebelliousness and shallow affect. The relatively greater degree of shallow affect or "don't care" attitude observed among single women who had had abortions may be a defensive reaction to uncomfortable feelings of being deviant.

Women whose husbands were in occupations of relatively lower status had more unfavourable psychological reactions to abortion than women whose husbands were in occupations of higher status. Previous research has found that attitudes toward abortion are less accepting among those in occupations of lower status.[8,9] Therefore, it is not surprising to find more psychologically unfavourable reactions after abortion among those who tend to accept it less. Further, it is probably more difficult to cope well after any operation when there are few resources available. The alternatives available to aid in coping with any event are much less for the lower-class woman than for the middle-class woman.

There is strong evidence from this study that perceived social support from others is associated with favourable psychological reactions after abortion. For example, when the woman reported that she had made the decision to have an abortion with the perceived support of others, she showed the least amount of hypochondriasis, ideas of persecution and self-depreciation. Similarly, when the woman perceived her physician's attitude as positive, she tended to score lowest on four scales, while women who perceived their physician's attitude as negative obtained the highest score on six scales, mainly those pertaining to somatic complaints. While it is difficult to disentangle the physician's "real" attitude from that perceived by the woman — and I made no attempt to do so — the relation between the woman's perception of support from others and her psychological reactions still holds. These findings are in line with those reported in an American study in which psychological reactions to abortion were found to be more favourable when the woman's partner or parent was perceived as more supportive in the decision to abort than when he or she was ambivalent or in opposition.[10]

These results clearly have important implications for the way in which physicians and their staff react to and treat women who want to have an abortion. It should be obvious that the mental health of a woman planning to have an abortion would be seriously endangered if she were to encounter a physician or a nurse with a critical, disapproving or punitive attitude toward her for having an abortion. In hospitals every effort should be made to prevent contact between women having abortions and staff who cannot control their feelings of disapproval or rejection of women undergoing abortion. Only individuals who can support the woman in her decision to have an abortion and comfort her should attend her.

The frequency with which most women reported having used contraceptives before the abortion was higher in this than in previous studies.[11-14] This may be because there were more young unmarried women in previous studies. Married and older women who have abortions are reported to have used contraceptives more than young unmarried women.[12,14] Nevertheless, only about one half of the women in this study reported having used contraceptives at the time of conception. A number of factors might have been responsible, such as the lack of availability of birth-control information and devices generally in Canada, and a number of motivational variables, which will not be explored here. As of 1971 there were only 66 family-planning clinics in Canada.[15] Contrast this with the estimated 700 birth-control clinics needed, as suggested by Ball on the basis of the British experience.[16] The finding that 91.5% of the couples were using contraceptives after the abortion suggests that the abortion itself resulted in more conscientious birth-control practices.

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